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The hour of broadcasts is Central European Time, which is one hour ahead of Greenwich Mean Time and 5 hours ahead of Eastern Standard Time in the United States.

ACTIVITY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Permanent Committee. — The Permanent Committee of the Institute met on June 6 for its Summer session. H. E Baron G. Acerbo, Delegate of the Italian Government and President of the Institute presided. The meeting was attended by the Delegates of the following countries: Germany, Argentina, Bulgaria, Chile, Colombia, Denmark, Spain, Finland, Hungary, Iran, Eire, Italy, Italian East Africa, Libya, Italian Islands of the Aegean, Japan, Paraguay, Portugal, Romania, Slovakia, Switzerland, Turkey.

At this session, the Permanent Committee took such administrative and financial measures as are apt to insure the regular course of the Institute activities during the next months. It also passed all necessary resolutions to maintain the Institute publications up to the standard which they have attained and which are the outward evidence of its vitality.

In order to proceed with the decision taken at its last session relative to the suggestions made by the President of the Institute regarding the program of work – suggestions concerning the study of the social problems of Agriculture – the Permanent Committee instructed the Secretary General to have the different Bureaus gather all possible documentation and all the material which the Institute may need in case at the proper time, it is called to lend its collaboration in this field.

Member States of the Institute. — The Hungarian Government has decided to enter Hungary into the IIIrd group of adhering members, in lieu of the Vth. This decision of the Hungarian Government, important in itself, has a very particular significance under the present circumstances. In fact, besides showing this Government's intention to help the Institute finances, this decision is the evidence of the full confidence that the Hungarian Government has in the future of this international institution, to which Hungary has ever lent its efficient and cordial collaboration.

The President of the International Institute of Agriculture received by the Head of the Italian Government. — On June 10, an official communication gave the following news:

« The Duce received at Palazzo Venezia Professor Baron Giacomo Acerbo, Delegate of the Italian Government and President of the International Institute of Agriculture. Baron Acerbo expounded in detail to the Duce all the activity displyed by the Institute even during these difficult years: an activity which has been accom-

panied by the confidence and active help of a large number of Member States of the different continents. The President of the International Institute of Agriculture presented the Head of the Italian Government with the latest publications of the Institute relative to world agricultural economy before and during the first period of the war.

The Duce expressed His satisfaction at the efforts made by the International Institute of Agriculture, which show its great vitality, and confirmed to Baron Acerbo, in order that the latter may communicate it to the Permanent Committee, that the Fascist Government will give its fullest support to the Institute. The Duce also expressed His conviction that this Institution – the first international body in the world born on the initiative of the Italian Sovereign – will be called to fill ever more important and complex functions in the international relations after the war ».

Printing activities. — The International Institute of Agriculture, in execution of the program set by its directing organs, the General Assembly and the Permanent Committee, continues in its task, and its publications appear regularly in spite of present difficulties.

Recently, a very important study has been published, in French on *Denrées et matières premières agricoles – Production et consommation dans les differentes parties du monde* [Agricultural Commodities and Raw Materials – Production and Consumption in the different parts of the world]. The first purpose of this monograph is to show, in a broad way, the portioning of production and consumption of each agricultural product among the different parts of the world, on the basis of the average data during the five years preceeding the outbreak of the present war. The second aim is to draw a general picture that may make it possible to ascertain, for the totality of agricultural production, the relative importance of each part of the world, both as a center of production and as a center of consumption. This synthesis of agricultural production and of the consumption of agricultural products from an international point of view, is undoubtedly an important contribution to the knowledge of essential facts in world economy, which may result particularly useful when the problems of post-war economic reconstruction will have to be studied and solved.

One of the problems which the International Institute of Agriculture has methodically dealt with during latest years, is that of agricultural indebtedness. The first plan of this study, concerning the evolution of this phenomenon after the war, its causes, structure and consequences, dealt with 26 States of the different continents. The results of this study were published in 1937. Recently, this work was resumed and completed by a new survey on *The Over-indebtedness of Farms and the Means for its Prevention and Control* published in N° 5 (1942) of the « Monthly Bulletin of Agricultural Economics and Sociology ». This study deals with the notion and chief forms of over-indebtedness, of the credit policies of banks and of the intervention of public authority.

N° 5 (1942) of the « Monthly Bulletin of Agricultural Statistics », under the heading *Maize World Area and Production in* 1941-42, contains a general survey on the chief characteristics of the culture of maize in the last season ended this year in April. The spread of the war all over the world, has had increasing repercussions on the commercial movement of cereals from one continent to another, and has created new tendecies in agricultural production and more particularly in the production of maize. This cereal is becoming more and more important in Europe, where its use in bread making is becoming general, while in America, and especially in Argentina, its culture has been greatly reduced on account of export difficulties.

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DISCOVERIES AND CURRENT EVENTS *

ITALY.

San José Scale Infestation †

Following the discovery of slight infestations of the San José scale (*Aspidiotus perniciosus*) in two orchards of the Provinces of Verona and Padua in 1940, the Italian Government, by Ministerial Decree of December 20, 1940, declared the control of scale insects of fruit trees compulsory. Control measures were energetically put into operation using 7 per cent. mineral oil emulsions during winter; however, despite this treatment, in the spring of 1941, traces of infestation were found in the same orchards and in three others in the aforesaid provinces; a small focus was also reported in the Province of Lucca.

For this reason, more severe measures were immediately taken for compulsory control which was also extended to nursery products by Ministerial Decree of February 15, 1941.

Some traces of infestation, however, having continued here and there in the three provinces mentioned, the Italian Government denounces, conformably to the International Convention for Plant Protection signed at Rome on April 16, 1929, the presence of the San José scale in the three Provinces of Lucca, Padua and Verona, and communicates having made compulsory, since December 1940, the control of this insect by means of 7 per cent. mineral oil emulsions, the efficacy of which on fruit crops has been recognized, and has decreed, as a precautionary measure, the disinfection of all nursery products by means of hydrocyanic acid gas fumigation.

To ensure security, these compulsory measures have been applied to all the provinces of Northern and Central Italy.

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Ministry of Agriculture and Forests, Rome to the International Institute of Agriculture.

SWITZERLAND.

Colorado Beetle Situation in 1941 *

Owing to the mild weather in April, 1941, the adult hibernating Colorado beetles (*Leptinotarsa decemlineata*) came out very early in regions with a favourable climate (April 26 at Cugy, Fribourg Canton; May 1 at Aesch, Basel-Land Canton; May 2 at Genève; May 12 at Clarmont, Vaud Canton, etc.) On the whole, there was not much sign of the beetle in the foci of the previous years.

The cold rains during May slowed down the coming out of the insects, scarcely begun, up to the end of May and the beginning of June. Adult beetles in any considerable number were only observed about mid June. It was at this time that the first ovipositions started. From mid June the temperature was high, as much as 30°C. and even over in many districts. During this period, it was found that the tendency to swarming was very strong. In fact, the western wind again brought entire swarms of beetles from the neighbouring French territory. Western Switzerland was invaded by many thousands of these indesirable visitors. They spread throughout the land even finding out secluded potato fields in the valleys of the Jura. Consequently there was a rapid and considerable increase in the number of beetles discovered.

The maximum number of foci of larvae was reported in the period from July 6 to 15 in Western Switzerland to mid July in Northern, Central and Eastern Switzerland.

The first nymphs were found during the third week of July, the first adults of the summer generation in the fourth week of the same month. The month of July, warm and dry, provided optimum conditions for the development of all stages of the Colorado beetle.

The potato producing centres at the foot of the Jura, in the cantons of Solothurn, Basel-Land and Aargau were especially affected.

Thanks to the effectual working of the Colorado Beetle Control Service damage was not severe. The invasion, however, has shown the farmers that it is a more serious danger than they formerly supposed. The first ovipositions of the second generation were observed from the first week of August. Spraying was found to be very efficacious in destroying the pest. The number of new foci reported, instead of increasing as was expected, soon began to diminish. Many eggs and young larvae were destroyed owing to the cool and damp weather during August and September. At higher altitudes, there were early frosts.

The surviving adults soon hibernated in the ground. Only one generation developed in the mountain cantons. The cool nights slowed down the evolution of the different stages of the insect.

* Communication from Dr F. T. WAHLEN, Director of the Federal Establishment for Agricultural Experiments, Zürich-Oerlikon, Switzerland.

This pest was reported for the first time in the following cantons, until now unaffected: Uri (Altdorf, June 29: eggs and young larvae), Appenzell A.-Rh. (Herisau, July 5: adults) and Nidwalden (Hergiswil, July 10: larvae).

To date, no focus has been found in the cantons of Graubünden and Ticino.

The following table indicates the situation as found at the end of 1941:—

	Cantons	Communes	Foci
German Switzerland	Zürich	150	1,317
	Bern (excluding Jura)	323	8,535
	Luzern	105	1,866
	Uri	1	2
	Schwyz	14	40
	Obwalden	4	16
	Nidwalden	6	57
	Glarus	5	7
	Zug	10	107
	Solothurn	124	2,809
	Basel-Stadt	3	251
	Basel-Land	73	2,557
	Schaffhaussen	30	491
	Appenzell-A.-Rh.	4	8
	Appenzell-I.-Rh.	2	3
	St.-Gallen	46	270
	Aargau	224	5,544
	Thurgau	57	89
	Total	1,181	23,969
French Switzerland	Genève	45	*
	Vaud	370	*
	Neuchâtel	62	*
	Bern (Bernese Jura)	146	*
	Fribourg	214	2,697
	Valais	19	179
	Total	856	Invasion widespread with the exception of Valais and Fribourg Cantons
	All Switzerland	2,037	Invasion widespread

* No exact figures; infestation being general and beetles found in practically all fields grown to potatoes.

The map given on p. 105 indicates the distribution of the Colorado beetle in the different districts. The pest proceeded throughout the length of the valleys and flew over the passes being carried along by the western winds which pre-

cede the storms. Since the first invasion of Switzerland, infestation has advanced as follows:—

Year	German Switzerland		French Switzerland		Entire country	
	Communes	Foci	Communes	Foci	Communes	Foci
1937	2	2	118	411	120	413
1938	314	895	513	approx. 3,600	827	approx. 4,500
1939	686	4,355	845	approx. 33,000	1,531	approx. 38,000
1940	732	8,774	586	Invasion widespread	1,318	Invasion widespread
1941	1,181	23,969	856	Invasion widespread	2,037	Invasion widespread

The number of communes contaminated has increased by 719 for the whole country. The figure for the foci reported in German Switzerland shows an increase of 200 per cent. (from 8774 to 23,969). The increase was particularly pronounced in the centres of Bern, Luzern, Schwyz, Obwalden, Nidwalden, Zug, St. Gallen and Thurgau. All the communes contaminated are in the canton of Genève, Neuchâtel and the Bernese Jura and for the greater part in the cantons of Vaud and Fribourg.

It is very satisfactory that in the canton of Schaffhaussen the number of foci have been reduced to half that of the preceding year. It is true that the swarms from outside were less considerable, but it should be noted, on the other hand, that spraying carried out with ordinary hand pumps or with motor pumps reduced the extent of infestation appreciably. This proves that if the control measures advocated are conscientiously and scrupulously executed, the chances of success are high. Control was effected according to the well known international rules. The collaboration of the Colorado Beetle Control Commission, the Federal Establishments for Agricultural Experiments of Lausanne (Mont Calme) and Zürich-Oerlikon and the cantonal and communal centres again proved to be very effectual.

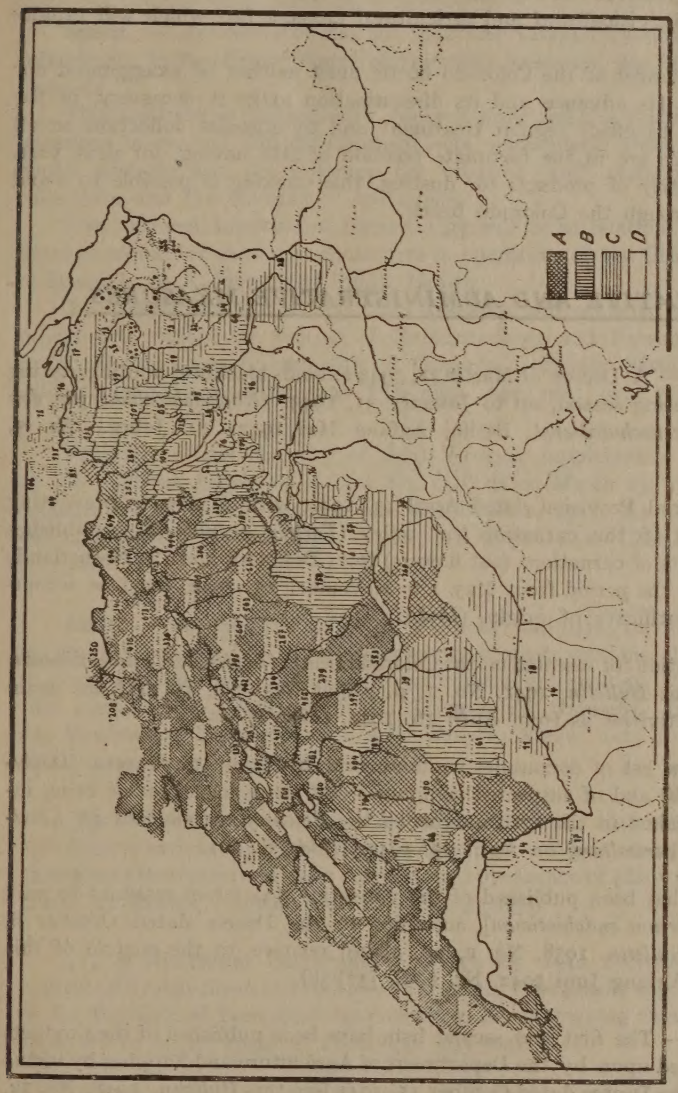
In the future, special attention will have to be given to the following points:—

(1) Instruction on effectual and rational control must be given to every potato grower.

(2) The communal authorities should give particular attention to the periodical inspection of fields. The systematical examination of all potato fields in a commune encounters special difficulty in war-time owing to shortage of labour; this must be overcome by making greater use of students, boy scouts and other associations for the young. It is a work which should be considered as an indispensable ' civil service '.

(3) The Geigy chemical works at Basel has produced a preparation of organic nature, without arsenic, which is very efficacious, at the same time being harmless to warm-blooded animals. This insecticide is not affected by

air or light, and acts either through contact or by ingestion. It has a particularly high adhesive capacity which makes it especially valuable for small



Map (scale 1/600,000) prepared by the Federal Bureau of Statistics.

A = Districts with over 200 foci
B = .. with 50 – 199 ..
C = .. with 10 – 49 ..
D = .. with less than 10 ..

scale growers who thus have a control product of prolonged efficacy to use as a dust; they will be able to control the Colorado beetle in their plots more effectually and more simply than was formerly the case with the rotenone dusts,

which, while being momentarily very effective, were rapidly modified through the action of rain and light, so that treatment had to be repeated and consequently was expensive. Moreover, this new preparation is equally effectual against many fruit, viticultural and agricultural crops, a fact which will rapidly make it popular.

(4) The danger of the Colorado beetle must neither be exaggerated nor underestimated. Its advance and its dissemination make it necessary, in the invaded regions, to effect regular treatment and to organize collection on all potato fields. We are in the fortunate position of still having, for next year, a sufficient quantity of products for dusting, thus making it possible to avoid serious losses through the Colorado beetle.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — A Decree of March 31, 1942 extends blackbird hunting, during the 1942-43 shooting season, up to January 31, 1943. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Mai 1942, 22. Jahrg., Nr. 5, S. 36).

*** Ministerial Provision dated April 13, 1942, with a view to preventing the introduction of the carnation leaf roller (*Tortrix pronubana*), establishes that consignments of carnations (cut flowers) from Denmark and the Netherlands imported during the period from May 1 to November 15, 1942, must be accompanied by a certificate of origin. (*Ibid.*).

*** The Station for research on the Colorado beetle (*Leptinotarsa decemlineata*) at Kruft [see this *Bulletin*, 1941, No. 1, p. 7 and Nos. 7-8, p. 141] has again recommenced activities as from April 16, 1942. (*Ibid.* S. 35).

*** The new list of communes contaminated by grape phylloxera [*Dactylosphaera vitifolii*] and of suspected communes and those in danger of being infected was published in the 17th number of the *Reichsministerialblatt der Landwirtschaftlichen Verwaltung* on April 25, 1942. (*Ibid.*, S. 36).

*** A list has been published of the vareieties of potatoes resistant to wart disease [*Synchytrium endobioticum*], according to the Decree dated October 8, 1937 [see this *Bulletin*, 1938, No. 2, pp, 28-29] relative to the control of this disease. (*Ibid.*, Anfang Juni 1942, Nr. 6, S. [37]-38).

Belgium. — The first and second lists have been published of the products definitively agreed upon by the Department of Agriculture and Supplies by virtue of Article 2 of the Decree dated October 15, 1941 [see this *Bulletin*, 1941, No. 12, p. 225] regulating the sale of insecticides, fungicides, weedicides and other parasiticides. (*Moniteur belge*, Bruxelles, 4 février 1942, n° 35, p. 713-714; 30 mai 1942, n° 150, p. 3529).

Denmark. — Decree No. 31 of January 19, 1942 modifies the Decree dated February 28, 1941 relative to the toxic substances utilized in the control of plant diseases and pests. (*Lovtidenden A.*, København, 13 Febr. 1942, Nr. 4, Sid. 41)

Spain. — By Decree of May 11, 1942, the National Institute of Parasitology subordinate to the Upper Board of Scientific Research, has been established at Granada.

This Institute is charged with research work and the study of parasitological questions in general and different subjects, particularly those regarding Spain, North Morocco and the Colonies; the creation and maintenance of suitable collections and the training of specialists.

The National Institute of Parasitology will be in relation with the different Services which for similar purposes are in operation at the General Departments of Morocco, the Colonies and Public Health.

The Upper Board of Scientific Research will organize the new Institute intended to replace the Section of Helminthology and Parasitology established by the Board at the University of Granada. (*Boletín Oficial del Estado*, Madrid, 24 de mayo de 1942, año VII, núm. 144, pág. 3634 y 3635).

France. — Law No. 473 of April 6, 1942 supplements Articles 12 and 29 and modifies Article 19 of Law No. 1318 dated March 25, 1941 regarding the organization of plant protection [see this *Bulletin*, 1941, No. 10, p. 188]. (*Journal officiel de l'Etat français*, Vichy, 11 avril 1942, LXXIV[ème] année, nº 87, p. 1369).

Italy. — By Ministerial Decree of October 14, 1941, the Royal Observatory for plant diseases at Pisa is divided into two separate sections, the one specializing in plant pathology and the other in agricultural entomology. Their circumscription comprises the Provinces of Pisa, Livorno and Grosseto. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 1-11 maggio 1942, anno XIV, n. 13-14, pp. 647-648).

*** Ministerial Circular No. 236 of February 24, 1942 requests the provincial Commissariats for plant diseases to report without delay to the phytopathological Observatory of their district the appearance of plant pests and diseases. (*Ibid.*, 21 marzo-1º aprile 1942, n. 9-10, p. 455).

*** A Ministerial Decree dated March 15, 1942 declares compulsory the control of broom-rapes of tobacco and legumes [*Orobanche* spp.] in the territory of the Province of Benevento by collecting and destroying these parasitic plants. (*Ibid.*, 11-12 aprile 1942, n. 11-12, pp. 563 564).

*** Ministerial Circular No. 255 dated March 17, 1942, establishes the modalities to be followed in the organization of locust control. (*Ibid.*, pp. 586-590).

*** Ministerial Circular No. 256 of the same date contains the measures to be observed for the marketing of anticryptogamic products. (*Ibid.*, p. 594).

*** By Royal Decree No. 575, dated May 4, 1942, the donation of his Entomological Institute at Rome to the Italian Government on December 13, 1941, by Count Federico Hartig has been officially accepted and its usage in perpetuity entrusted to the National Institute of Pure and Applied Entomology established at Rome by Law No. 1689 of October 30, 1940 [see this *Bulletin*, 1941, No. 2, p. 25]. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 9 giugno 1942, anno 83°, n. 135, p. 2349).

Portugal. — 'Portaria' No. 9.995 of January 9, 1942 orders, *inter alia*, that the possessors of copper sulphate and other copper fungicides are obliged to report the quantity held to the Governing Commission for chemical and pharmaceutical products, either directly or through the intermediary of specially nominated institutions. (*Diário do Govêrno*, I série, Lisboa, 9 de janeiro de 1942, núm. 7, pág. 18).

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Butter preservation meets with many difficulties which are the consequence of the nature itself of the prime material. If milk were obtained under all necessary hygienic conditions, it would be naturally much easier to obtain butter which would preserve better. But even when the prime material and factory conditions are irreproachable, butter is still subject to alterations. N° 6 (1942) of the « Monthly Bulletin of Agricultural Science and Practice », contains an article on *Les alterations du beurre pendant sa conservation* viz., rancidness, tallowy appearence and fishy smell. As the processes which cause the alteration of butter have not yet been entirely ascertained, this study aims at giving a general idea on the present stage of this problem, with a view to avoiding the faults mentioned above. The importance of this problem is further emphasised by the fact that the « Deutsche Gesellschaft für Fettforschung » (German Research Society on fats) has opened a competition for the study of alterations that cause the fishy smell of butter.

Among the risks to which agriculture is subject, damages caused to crops by the forces of nature – hail, drought, floods, fire, plant parasites, landslides – are those from which farmers are mostly hit and for which sufficient possibilities of free insurance with private insurance companies are still lacking. In reality, this is a field of activity that might justify Government intervention which should make farmers' insurance obligatory and organise such insurance on its own account or through private insurance companies, which it would indemnify for eventual losses. During the last twenty years, many countries have made considerable progress in the way of obligatory crop insurance. In the U. S. S. R. and in Japan there are obligatory insurance systems that cover a broad field. More or less important efforts in the same direction have been made in many other countries – some parts of the United States, Argentina, Bulgaria, Switzerland, Canada, etc. This problem has been treated in an article on *Obligatory Crop Insurance*, published in N° 5 (1942), of the « Monthly Bulletin of Agricultural Economics and Sociology ».

International Agricultural Cinémathèque. — The work for the constitution at the International Institute of Agriculture of an International Agricultural Cinémathèque has been continued. The films received as gifts so far, are particularly interesting under the double aspect of propaganda and agricultural education. They deal with the most important agricultural products, and livestock breeding. Altogether, these films total 12.000 metres and represent an important cinematographic documentation on the agriculture of many countries.

Meeting of oleicultural experts. — Upon the invitation of the International Federation of Oleiculture, the Institute has been represented at the meeting of oleicultural experts that took place in Florence from the 15th to the 17th of May 1942. It must be mentioned that a proposal was made at that meeting for the creation of a Mediterranean Center of Oleicultural Studies to be located in Rome at the International Federation of Oleiculture, which is connected with the Institute.

A meeting dealing with bibliography and documentation. — The Institute was represented at this meeting which was held at Venice from the 26th to the 28th of May 1942. The creation was recommended of a State or semi-official body whose charge should be the cathaloguing and classification, as soon as they appear, of all the new Italian publications, and the printing and distribution of a bibliographic card bearing the decimal classification, the classification of the Washington Library of Congress and a subject-heading for the alphabetical cathalogues by matter. As regards size and bibliographic details, it was recommended to stick to already established and officially recognised international standards.

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